UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

AUG 1 7 2017

MEMORANDUM

SUBJECT: Engineering Evaluation/Cost Analysis Approval Memorandum for Proposed Non-Time Critical Removal Action at the Des Moines TCE Site, Des Moines, IA
SSID 0725

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TO: Mary P. Peterson, Director
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The purpose of this memorandum is to document the U.S. Environmental Protection Agency's approval to continue proceeding with an Engineering Evaluation/Cost Analysis for a non-time critical removal action, or NTCRA at the Des Moines TCE Site in Des Moines, Iowa. The EE/CA evaluates cleanup alternatives for demolition and disposal of on-site structures at the site. The EPA has consulted and will continue to consult with the Iowa Department of Natural Resources and EPA Headquarters on this NTCRA.

I. Site Background

A. Site Description and History

The site is located in south-central Des Moines on the east side of the Raccoon River. It is southwest of the intersection of W. Martin Luther King Jr. Parkway and SW 16th Street in Des Moines, Polk County, Iowa. The site is within Section 8, Township 78 North, Range 42 West. The site includes a 43-acre property, owned by Dico, Inc., that includes several buildings used for a variety of industrial operations throughout its history. Buildings remaining on the Dico site include Buildings 1, 2, and 3; and slab foundations remaining for the Maintenance Building and Buildings 4 and 5, as well as an office and a

production building. A surface water feature at the south end of the site is referred to as the South Pond Area or SPA.

For approximately 40 years, historical operations at the site have included a variety of industrial uses and operations—steel wheel manufacturing, chemical and herbicide distribution, and pesticide formulation processes. Releases during Dico's operations at the site included the following: trichloroethylene or TCE, 1,2-dichloroethene, and vinyl chloride in groundwater; residual pesticides in shallow soils; and pesticides and polychlorinated biphenyls or PCBs within buildings and pesticides in soils.

The site is divided into four OUs:

- OU1 – groundwater TCE plume
- OU2 – originated as source soils associated with TCE groundwater contamination, but later focused on residual pesticides in shallow soils.
- OU3 – source area of tetrachloroethene, or PCE, groundwater contamination north of the site
- OU4 – pesticides and PCBs in several buildings onsite, and in drainage areas of the site, including the SPA.

The 1986 ROD addressed OU1 (EPA 1986), the 1992 ROD addressed OU3 (EPA 1992), and the 1996 ROD addressed OU2 and OU4 (EPA 1996). The 1996 ROD for OU2 and OU4 selected Building Alternative 2 – Limited Action and Soil Alternative 2 – Limited Action. Under these remedies, contamination within the buildings and in site soils would remain in place and exposure to the contamination would be controlled through encapsulation of contaminated building materials and capping of contaminated soils.

The five-year review completed in April 2013 deferred the protectiveness determinations for OU4 and recommended sampling the SPA to assess ecological risks (EPA 2013). The 2013 five-year review also identified risk to trespassers in the buildings at OU4, due to broken windows and unsecured entrances in the buildings where the encapsulation over the contaminated areas has failed, and recommended monitoring to determine the extent of exposure to trespassers. Sampling and an ecological risk assessment for the SPA was completed in October 2015, and indicated an unacceptable risk to ecological receptors due to pesticide and PCB contamination (EPA 2015). An addendum to the five-year review was then completed in 2016 (EPA 2016). This addendum indicated that trespassers from the indigent community were removed from the buildings at OU4 and security measures were put in place to prevent additional trespassing. The addendum recommended continued efforts to verify that the buildings containing contamination be made inaccessible to trespassers and updating the human health risk assessment (HHRA) to assess potential human health risk. This addendum indicated that the remedy at OU4 is protective regarding contamination in the buildings, as the only activities on site relate to operation and maintenance of the pump and treat remediation system associated with OU1. The site is fenced, and the property owner provides site security.

The site has been rezoned since the remedy was selected for OU2 and OU4 in the 1996 ROD. The site was previously zoned for industrial use, and existing remedy decisions were based on an industrial land use. On June 13, 2005, most of the Dico property was rezoned to the Central Business Mixed Use

District C-3 B designation. This allows for a variety of uses including residential, recreational, office, commercial, and retail. The EPA prepared a focused feasibility study to address options for building demolition, but is now opting to pursue a NTCRA in lieu of issuing a proposed plan for building demolition. The proposed EE/CA evaluates alternatives for addressing human health risk associated with buildings and slabs that remain on site in a way that is compatible with changing land use.

II. Statutory and Regulatory Basis for NTCRA

Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act authorizes the EPA to conduct or to direct responsible parties to conduct removal actions whenever "any hazardous substance is released or there is a substantial threat of such a release into the environment." In addition, the National Contingency Plan provides that the EPA may take any appropriate removal action when it determines, based on multiple factors outlined in the NCP, that "there is a threat to public health or welfare of the United States or the environment." *See* 40 C.F.R. § 300.415(b)(1-2). When the agency determines that a removal action is appropriate and a planning period of at least six months exists before on-site activities will be initiated, the NCP establishes additional requirements for the use of non-time critical removal authority.

In support of the agency's determination that the contaminated on-Site buildings constitute a threat to public health or the environment and, therefore, that a NTCRA is appropriate at this time, the applicable NCP criteria and suggested NTCRA considerations are reviewed in turn below.

A. Factors for Determining the Appropriateness of a Removal Action

Section 300.415(b)(2) of the NCP, 40 C.F.R. § 300.415(b)(2), provides a list of factors for the EPA to consider in determining whether a removal action is appropriate. Factors applicable to the removal action planned for this site are as follows:

1. *Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.*

The changing land use of the site by its rezoning from industrial to mixed use, requires the demolition of the contaminated on-site buildings. Potentially toxic hazardous substances within the buildings and building foundations present an actual or potential exposure to human health and the environment. On-site buildings and building foundations contain PCBs and pesticide residue, including Aldrin and dioxin. Given the changing land use in the area and the rezoning of the site for mixed use development, the buildings must be demolished and disposed of to limit a direct contact threat to human and ecologic receptors. Demolition and proper disposal of building materials would eliminate human exposure via inhalation, incidental ingestion, and dermal absorption to contamination present within site buildings.

Additionally, the 2013 five-year review identified risk to trespassers in the buildings at OU4, due to broken windows and unsecured entrances in the buildings where the encapsulation over the contaminated areas has failed over time. Though the trespassing issue has improved over the past year, in the absence of this response action, the buildings will continue to deteriorate, creating a greater potential for releases, and threat of releases, of hazardous substances into the environment, and therefore the greater potential for exposure to nearby human populations, animals, or the food chain.

2. *Actual or potential contamination of drinking water supplies or sensitive ecosystems.*

Not applicable to the proposed NTCRA. TCE and PCE groundwater plumes on site are being addressed under the remedial process.

3. *Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that my pose a threat of release.*

Not applicable, as drums, barrels, tanks, or other bulk storage containers are not known to exist at the site at this time.

4. *High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.*

On-site soils are contaminated with pesticides. Following demolition of the buildings, extension of an asphalt or vegetative cap where necessary would prevent human exposure to contaminants of concern in contaminated soil at levels that pose unacceptable risk to commercial and recreational uses.

5. *Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.*

As stated above, the contaminated buildings are deteriorating. Encapsulation over the contaminated areas has failed over time. Portions of the buildings are open to the elements and weather conditions which may accelerate deterioration and cause hazardous substances to migrate or be released. In the absence of this response action, the buildings will continue to deteriorate, creating a greater potential for releases, and threat of releases, of hazardous substances into the environment, and therefore the greater potential for exposure to nearby human populations, animals, or the food chain.

6. *Threat of fire or explosion.*

Not applicable.

7. *The availability of other appropriate federal or state response mechanisms to respond to the release.*

The EPA has worked closely with the IDNR in pursuing the proposed NTCRA. The IDNR supports the EPA's efforts to ensure contamination within on-site buildings is expeditiously addressed.

8. *Other situations or factors that may pose threats to public health or welfare of the United States or the environment.*

At this time, contamination within on-site buildings is not known to present other circumstances that pose threats to public health, welfare, or the environment.

B. Factors for Determining the Appropriateness of the NTCRA Process

A central feature of the EPA's Superfund program philosophy is integration of the removal and remedial programs in order to achieve the greatest human health and environmental protection in the most efficient fashion. To this end, the EPA has urged Superfund decision makers to broadly use the

CERCLA removal authority to achieve timely and protective results. Due to process and statutory differences between removal and remedial actions, the determination of which approach is most appropriate for a site is made by the EPA on a case-by-case basis. In addition to considering the NCP factors outlined above, existing EPA guidance directs consideration of the following factors in determining whether to employ a NTCRA in a particular situation:

1. *Time-sensitivity of the response*

As stated above, changing land use has made the current condition of the buildings a potential threat to human health and the environment. The buildings are deteriorating and will continue to deteriorate in the absence of this response action. Demolition and disposal of the buildings must be closely monitored to eliminate the potential threat to human health and the environment from inappropriate disposal of building materials.

2. *Complexity of both the problems to be addressed and the action to be taken.*

The EPA has determined that the demolition and disposal of the buildings through a NTCRA is appropriate in light of the deterioration and continued threat of release of hazardous substances into the environment. The EPA anticipated addressing the buildings through the remedial process, and prepared a focused feasibility study which addressed options for building demolition and disposal. In lieu of issuing a proposed plan, the EPA is opting to pursue a NTCRA, in an effort to expedite building demolition and disposal and encourage redevelopment of the property.

3. *Comprehensiveness of the proposed action.*

The removal alternatives developed under this EE/CA will address the contamination associated with the on-site buildings, through their demolition and disposal. The agency does not anticipate that further response actions addressing the contaminated buildings will be necessary.

4. *Likely cost of the action.*

EE/CA estimates the cost of on-site disposal to be $14 million and the cost of offsite disposal to be $11-$13 million. These costs may be reduced by several million dollars if Dico and the EPA reach an agreement with a third party developer to assume responsibility for installation of the asphalt or vegetative cap, and operation and maintenance of the cap, among others.

III. Enforcement Strategy

Pursuant to Section 300.415(a)(2) of the NCP, 40 C.F.R. § 300.415(a)(2), the EPA shall make an effort to determine whether responsible parties "can and will perform the necessary removal action promptly and properly." In accordance with this enforcement first policy, the EPA has approached Dico about performing a NTCRA at the site pursuant to an Administrative Order on Consent, and will continue to pursue a potentially responsible party lead action.

IV. Proposed Actions

The purpose of the EE/CA is to evaluate removal alternatives to eliminate and/or minimize human and environmental harm through the demolition and disposal of contaminated buildings at the Site. Pursuant to the NCP and existing agency guidance on EE/CAs, alternatives will be evaluated based upon

effectiveness, implementability, cost, compliance with applicable or relevant and appropriate requirements, and consistency with any anticipated long-term remedial action. The alternatives proposed in the EE/CA include no action, building demolition with off-site disposal, and building demolition with on-site disposal.

V. Estimated Costs

The EE/CA estimates the cost of on-site disposal to be $14 million and the cost of offsite disposal to be $11-$13 million. These costs may be reduced by several million dollars depending on certain redevelopment details.

VI. Public Involvement

Pursuant to Section 300.415(n)(4) of the NCP, 40 C.F.R. § 300.415(n)(4), the EPA expects to issue an EE/CA for public comment in August 2017.

VII. Environmental Justice Analysis

To identify potential environmental justice areas of concern, Region 7 uses available environmental and demographic information to highlight locations where additional review may be warranted. EJ screening results in a preliminary characterization of potential environmental and health impacts that may fall disproportionately on low-income and/or minority populations. The EPA will evaluate potential EJ areas of concern in the vicinity of the site.

VIII. Recommendation

Site investigations have determined that there has been a release of a hazardous substance to the environment at the site. Additionally, conditions at the site meet NCP and guidance criteria for a NTCRA. Consistent with Section 104(b) of CERCLA and Section 300.415(b)(4) of the NCP, 40 C.F.R. § 300.415(b)(4), further investigation is necessary to plan and direct future response actions. We recommend your approval of this request to proceed with an EE/CA to perform a NTCRA at the Des Moines TCE Site.

IX. Approval/Disapproval

Approve: Mary P. Peterson Date: 8/17/17
Mary P. Peterson, Director
Superfund Division

Disapprove: _____ Date: _____
Mary P. Peterson, Director
Superfund Division